Robert R Kay

List of Publications by Year
in descending order

96 papers	5,760 citations	57758 44 h-index	82547 72 g-index
103 all docs	103 docs citations	103 times ranked	4193 citing authors

#	Article	IF	Citations
1	Chemical structure of the morphogen differentiation inducing factor from Dictyostelium discoideum. Nature, 1987, 328, 811-814.	27.8	373
2	Chemotaxis in the Absence of PIP3 Gradients. Current Biology, 2007, 17, 813-817.	3.9	260
3	Changing directions in the study of chemotaxis. Nature Reviews Molecular Cell Biology, 2008, 9, 455-463.	37.0	180
4	Origins of the prestalk-prespore pattern in Dictyostelium development. Cell, 1989, 59, 1157-1163.	28.9	177
5	Sequence and analysis of chromosome 2 of Dictyostelium discoideum. Nature, 2002, 418, 79-85.	27.8	176
6	Mechanism of eIF6 release from the nascent 60S ribosomal subunit. Nature Structural and Molecular Biology, 2015, 22, 914-919.	8.2	168
7	Uses and abuses of macropinocytosis. Journal of Cell Science, 2016, 129, 2697-705.	2.0	160
8	The Role of DIF-1 Signaling in Dictyostelium Development. Molecular Cell, 2000, 6, 1509-1514.	9.7	157
9	Comparative genomics of the social amoebae Dictyostelium discoideum and Dictyostelium purpureum. Genome Biology, 2011, 12, R20.	9.6	141
10	Defective ribosome assembly in Shwachman-Diamond syndrome. Blood, 2011, 118, 4305-4312.	1.4	141
11	A plasma membrane template for macropinocytic cups. ELife, 2016, 5, .	6.0	140
12	Functional drug screening reveals anticonvulsants as enhancers of mTORâ€independent autophagic killing of Mycobacterium tuberculosis through inositol depletion. EMBO Molecular Medicine, 2015, 7, 127-139.	6.9	137
13	Mutation of protein kinase A causes heterochronic development of Dictyostelium. Nature, 1992, 356, 171-172.	27.8	133
14	Characterization of TSET, an ancient and widespread membrane trafficking complex. ELife, 2014, 3, e02866.	6.0	114
15	Neurofibromin controls macropinocytosis and phagocytosis in Dictyostelium. ELife, 2015, 4, .	6.0	111
16	Biosynthesis of Dictyostelium discoideum differentiation-inducing factor by a hybrid type I fatty acidâ€“type III polyketide synthase. Nature Chemical Biology, 2006, 2, 494-502.	8.0	110
17	Developmental regulation of a stalk cell differentiation-inducing factor in Dictyostelium discoideum. Developmental Biology, 1982, 91, 191-196.	2.0	108
18	The origins and evolution of macropinocytosis. Philosophical Transactions of the Royal Society B: Biological Sciences, 2019, 374, 20180158.	4.0	108

#	Article	IF	Citations
19	Sex Determination in the Social AmoebaDictyostelium discoideum. Science, 2010, 330, 1533-1536.	12.6	100
20	Cyclic AMP is an inhibitor of stalk cell differentiation in Dictyostelium discoideum. Developmental Biology, 1988, 126, 108-114.	2.0	95
21	Bleb-driven chemotaxis of Dictyostelium cells. Journal of Cell Biology, 2014, 204, 1027-1044.	5.2	95
22	Chemotaxis of a model organism: progress with Dictyostelium. Current Opinion in Cell Biology, 2015, 36, 7-12.	5.4	91
23	Cell-Fate Choice in Dictyostelium: Intrinsic Biases Modulate Sensitivity to DIF Signaling. Developmental Biology, 2000, 227, 56-64.	2.0	90
24	DIF-1 induces the basal disc of the Dictyostelium fruiting body. Developmental Biology, 2008, 317, 444-453.	2.0	88
25	Two distinct functions for PI3-kinases in macropinocytosis. Journal of Cell Science, 2013, 126, 4296-307.	2.0	83
26	Blebbing of Dictyostelium cells in response to chemoattractant. Experimental Cell Research, 2006, 312, 2009-2017.	2.6	81
27	Purification of stalk-cell-inducing morphogens from Dictyostelium discoideum. FEBS Journal, 1983, 136, 51-56.	0.2	78
28	Chapter 23 Cell Differentiation in Monolayers and the Investigation of Slime Mold Morphogens. Methods in Cell Biology, 1987, 28, 433-448.	1.1	76
29	The RdeA-RegA System, a Eukaryotic Phospho-relay Controlling cAMP Breakdown. Journal of Biological Chemistry, 1999, 274, 27379-27384.	3.4	76
30	A bZIP/bRLZ transcription factor required for DIF signaling in Dictyostelium. Development (Cambridge), 2004, 131, 513-523.	2.5	75
31	How blebs and pseudopods cooperate during chemotaxis. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 11703-11708.	7.1	75
32	Possible roles of the endocytic cycle in cell motility. Journal of Cell Science, 2007, 120, 2318-2327.	2.0	71
33	DIF signalling and cell fate. Seminars in Cell and Developmental Biology, 1999, 10, 577-585.	5.0	70
34	Widespread duplications in the genomes of laboratory stocks of Dictyostelium discoideum. Genome Biology, 2008, 9, R75.	9.6	67
35	Cross-induction of cell types inDictyostelium: evidence that DIF-1 is made by prespore cells. Development (Cambridge), 2001, 128, 4959-4966.	2.5	67
36	A flavin-dependent halogenase catalyzes the chlorination step in the biosynthesis of Dictyostelium differentiation-inducing factor 1. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 5798-5803.	7.1	65

#	Article	IF	Citations
37	Rapid and efficient genetic engineering of both wild type and axenic strains of Dictyostelium discoideum. PLoS ONE, 2018, 13, e0196809.	2.5	65
38	Taking the plunge: terminal differentiation in Dictyostelium. Trends in Genetics, 1999, 15, 15-19.	6.7	62
39	Pressure sensing through Piezo channels controls whether cells migrate with blebs or pseudopods. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 2506-2512.	7.1	57
40	The Biosynthesis of Differentiation-Inducing Factor, a Chlorinated Signal Molecule Regulating DictyosteliumDevelopment. Journal of Biological Chemistry, 1998, 273, 2669-2675.	3.4	56
41	Identification of new differentiation inducing factors from Dictyostelium discoideum. Biochimica Et Biophysica Acta - General Subjects, 2006, 1760, 754-761.	2.4	55
42	Morphogen hunting in Dictyostelium. Development (Cambridge), 1989, 107, 81-90.	2.5	55
43	Dictyostelium uses etherâ€linked inositol phospholipids for intracellular signalling. EMBO Journal, 2014, 33, 2188-2200.	7.8	53
44	Function of small GTPases inDictyosteliummacropinocytosis. Philosophical Transactions of the Royal Society B: Biological Sciences, 2019, 374, 20180150.	4.0	51
45	Selective induction of stalk-cell-specific proteins in Dictyostelium. Differentiation, 1985, 28, 209-216.	1.9	47
46	Dictyostelium transcriptional responses to Pseudomonas aeruginosa: common and specific effects from PAO1 and PA14 strains. BMC Microbiology, 2008, 8, 109.	3.3	46
47	Forming Patterns in Development without Morphogen Gradients: Scattered Differentiation and Sorting Out. Cold Spring Harbor Perspectives in Biology, 2009, 1, a001503-a001503.	5.5	46
48	The physiological regulation of macropinocytosis duringDictyosteliumgrowth and development. Journal of Cell Science, 2018, 131, .	2.0	45
49	The Dictyostelium genome project an invitation to species hopping. Trends in Genetics, 1999, 15, 294-297.	6.7	44
50	New prestalk and prespore inducing signals in Dictyostelium. Developmental Biology, 2005, 282, 432-441.	2.0	41
51	Developmental timing in Dictyostelium is regulated by the Set1 histone methyltransferase. Developmental Biology, 2006, 292, 519-532.	2.0	37
52	A demonstration of pattern formation without positional information in Dictyostelium. Development Growth and Differentiation, 2004, 46, 363-369.	1.5	36
53	An electrogenic proton pump in plasma membranes from the cellular slime mouldDictyostelium discoideum. FEBS Letters, 1984, 175, 422-428.	2.8	34
54	Surface area regulation: underexplored yet crucial in cell motility. Nature Reviews Molecular Cell Biology, 2008, 9, 662-662.	37.0	32

#	Article	IF	Citations
55	Regulation of Rap1 activity is required for differential adhesion, cell-type patterning and morphogenesis inDictyostelium. Journal of Cell Science, 2009, 122, 335-344.	2.0	31
56	Differentiation-inducing-factor dechlorinase, a novel cytosolic dechlorinating enzyme from Dictyostelium discoideum. FEBS Journal, 1992, 208, 531-536.	0.2	30
57	Macropinocytosis: Biology and mechanisms. Cells and Development, 2021, 168, 203713.	1.5	30
58	A PIP5 Kinase Essential for Efficient Chemotactic Signaling. Current Biology, 2014, 24, 415-421.	3.9	29
59	The Atypical MAP Kinase ErkB Transmits Distinct Chemotactic Signals through a Core Signaling Module. Developmental Cell, 2019, 48, 491-505.e9.	7.0	28
60	Akt and SGK protein kinases are required for efficient feeding by macropinocytosis. Journal of Cell Science, 2019, 132, .	2.0	26
61	Image based modeling of bleb site selection. Scientific Reports, 2017, 7, 6692.	3.3	25
62	Signals controlling cell differentiation and pattern formation inDictyostelium. Genesis, 1988, 9, 579-587.	2.1	24
63	A new Dictyostelium prestalk cell sub-type. Developmental Biology, 2010, 339, 390-397.	2.0	23
64	Mutants in the Dictyostelium Arp2/3 complex and chemoattractant-induced actin polymerization. Experimental Cell Research, 2007, 313, 2563-2574.	2.6	22
65	Method to study cell migration under uniaxial compression. Molecular Biology of the Cell, 2017, 28, 809-816.	2.1	20
66	Chemotaxis and cell differentiation in Dictyostelium. Current Opinion in Microbiology, 2002, 5, 575-579.	5.1	18
67	Migration of Dictyostelium slugs: Anteriorâ€like cells may provide the motive force for the prespore zone. Cytoskeleton, 2009, 66, 1073-1086.	4.4	17
68	Identification of a Eukaryotic Reductive Dechlorinase and Characterization of Its Mechanism of Action on Its Natural Substrate. Chemistry and Biology, 2011, 18, 1252-1260.	6.0	16
69	Dictyostelium development: Lower STATs. Current Biology, 1997, 7, R723-R725.	3.9	15
70	The exocytic genesecAis required forDictyosteliumcell motility and osmoregulation. Journal of Cell Science, 2010, 123, 3226-3234.	2.0	15
71	SrfB, a member of the Serum Response Factor family of transcription factors, regulates starvation response and early development in Dictyostelium. Developmental Biology, 2008, 316, 260-274.	2.0	14
72	Amplification of PIP3 signalling by macropinocytic cups. Biochemical Journal, 2018, 475, 643-648.	3.7	13

#	Article	IF	Citations
73	Repellent and Attractant Guidance Cues Initiate Cell Migration by Distinct Rear-Driven and Front-Driven Cytoskeletal Mechanisms. Current Biology, 2018, 28, 995-1004.e3.	3.9	13
74	Diffusible signal molecules controlling cell differentiation and patterning in Dictyostelium. Development (Cambridge), 1991, 113, 131-139.	2.5	13
75	A polycycstin-type transient receptor potential (Trp) channel that is activated by ATP. Biology Open, 2016, 6, 200-209.	1.2	12
76	Living on soup: macropinocytic feeding in amoebae. International Journal of Developmental Biology, 2019, 63, 473-483.	0.6	12
77	Control of gene expression: Cyclic AMP and development in the slime mould. Nature, 1983, 301, 659-659.	27.8	9
78	The search for morphogenes inDictyostelium. BioEssays, 1988, 9, 187-191.	2.5	9
79	Metabolic pathways for differentiation-inducing factor-1 and their regulation are conserved between closely related Dictyostelium species, but not between distant members of the family. Differentiation, 1995, 58, 95-100.	1.9	9
80	Morphogenesis and differentiation of Dictyostelium cells interacting with immobilized glucosides: dependence on DIF production. Differentiation, 1992, 49, 133-141.	1.9	8
81	Differentiation and patterning in Dictyostelium. Current Opinion in Genetics and Development, 1994, 4, 637-641.	3.3	8
82	Xpf suppresses mutagenic consequences of bacterial phagocytosis in Dictyostelium. Journal of Cell Science, 2016, 129, 4449-4454.	2.0	8
83	High-throughput Measurement of Dictyostelium discoideum Macropinocytosis by Flow Cytometry. Journal of Visualized Experiments, 2018, , .	0.3	8
84	Genetic Engineering of Dictyostelium discoideum Cells Based on Selection and Growth on Bacteria. Journal of Visualized Experiments, 2019, , .	0.3	8
85	Position-Dependent regulation of the prestalk-prespore pattern inDictyostelium slugs. Genesis, 1990, 11, 447-452.	2.1	7
86	Novel Development Rescuing Factors (DRFs) Secreted by the Developing Dictyostelium Cells, That are Involved in the Restoration of a Mutant Lacking MAP-kinase ERK2. Zoological Science, 2004, 21, 829-834.	0.7	7
87	A new environmentally resistant cell type from Dictyostelium. Microbiology (United Kingdom), 2007, 153, 619-630.	1.8	6
88	Chemotactic Blebbing in Dictyostelium Cells. Methods in Molecular Biology, 2016, 1407, 97-105.	0.9	5
89	Dictyostelium Cultivation, Transfection, Microscopy and Fractionation. Bio-protocol, 2015, 5, .	0.4	5
90	Morphogens fromDictyostelium discoideum. Biological Mass Spectrometry, 1988, 16, 353-355.	0.5	4

#	Article	IF	Citations
91	A mutational analysis of Dictyostelium discoideum multicellular development. Microbiology (United) Tj ETQq1 1 0.784314 rgBT /Over	1.8	3
92	The Amoebal Model for Macropinocytosis. Sub-Cellular Biochemistry, 2022, 98, 41-59.	2.4	3
93	Endocytosis: RasGAPs Help Organize Macropinocytic Cups. Current Biology, 2020, 30, R883-R885.	3.9	2
94	Effects of BUdR on developmental functions of Dictyostelium discoideum. Cell Differentiation, 1978, 7, 33-45.	0.4	1
95	How cells live together. Nature, 1981, 294, 108-109.	27.8	0
96	My 2,000 best films: parallel phenotyping of Dictyostelium development. Genome Biology, 2007, 8, 220.	9.6	0